



**PATIENT**

**PRESENTING CLINICAL SIGNS**

Mocha Bennett

History: TOTAL PROTEIN 7.5g/dL 25.07.411 High ALBUMIN 4.0g/dL 02.74.48 GLOBULIN 3.5g/dL 11.63.610 A/G RATIO 1.1 0.10.82.08 AST (SGOT) 51IU/L 215662500 ALT (SGPT) 209IU/L 2121181500

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

18

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Brian Klug

**HOSPITAL NAME**

Sondel Family VC

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High GGT 4IU/L 5112100 Total Bilirubin 0.1MG/DL 0.10.10.34 BUN 22MG/DL 2631200 Creatinine 0.7MG/DL 0.10.51.615 SDMA 6.5UG/dL <14.0 BUN/CREAT RATIO 31 1427100 High PHOSPHORUS 5.1MG/DL 1.02.56.010.0 Glucose 111MG/DL 2570138500 CALCIUM 11.0MG/DL 68.911.416 MAGNESIUM 1.9mEq/L. 0.751.52.54.0 SODIUM 145MEQ/L 125139154175 POTASSIUM 5.2MEQ/L 2.03.65.510.0 NA/K RATIO 28 15273875 CHLORIDE 108MEQ/L 75102120160 CHOLESTEROL 304MG/DL 1092324750 TRIGLYCERIDE 322mg/dL 2292911000 High AMYLASE 453IU/L 2529011257500 PrecisionPSL 48U/L 24140 Pancreatitis is unlikely, but a normal PrecisionPSL result does not completely exclude pancreatitis as a cause for gastrointestinal signs. CPK 753IU/L 40598955000 Sample Conditions Hemolysis 2+ No significant interference. Accuplex TEST RESULTS REFERENCE RANGE STATUS Heartworm (Antigen) NEGATIVE There were no measurable amounts of adult female heartworm antigen in this sample. Adult Dirofilaria immitis antigens will not be detected for 5 to 7 months following exposure to early larval stages.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some mild age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 4.3 cm. The right kidney measured 4.6 cm. Occasional cortical cysts were noted in the kidneys. Slight nonobstructive pinpoint mineralizations were noted in the kidneys.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having largely normal shape, size, position and acceptable echogenicity for this age group and breed. Some mild heterogeneity was noted within the adrenal parenchyma without concerning capsular distortion. These changes are likely age related but should be monitored by sonogram should the patient be suspected of having adrenal disease. The right adrenal gland measured 0.86 cm at the caudal pole and 0.5 cm at the cranial pole. The left adrenal gland measured 0.54 cm at the caudal pole and 0.46 cm at the caudal pole.

**Spleen**

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-



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related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes were noted. This is a minor change.

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**Liver**

The **liver** was mildly swollen, slightly heterogenous and hypoechoic. A 1.08 cm nondisruptive nodule was noted. Hyperechoic nodules were also noted, consistent with lipogranulomas. Minor gallbladder debris was noted, physiological.

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Pomeranian

**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The **pancreas** was hypoechoic and irregular with enhanced surrounding mesentery and undulating contour. Low grade pancreatitis is suspected.

**WEIGHT**

18

**ULTRASONOGRAPHIC FINDINGS**

- Benign hepatopathy with occasional nondisruptive nodules- FNA could be considered for further definition. Hyperechoic nodules were also noted, consistent with lipogranulomas.
- Slight heterogenous adrenal glands
- Hypoechoic, irregular pancreas- Low grade pancreatitis is suspected.
- Age-related renal changes with occasional cysts and mineralization
- The remainder of the abdomen appears to be largely geriatric in nature.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Reactive hepatopathy is likely the cause of the liver enzyme elevations. Subxiphoid palpation is recommended to assess for pain or discomfort associated with the pancreas. Empirical treatment for pancreatitis is warranted. FNA of the liver and pancreas could be considered to define inflammatory cell type.

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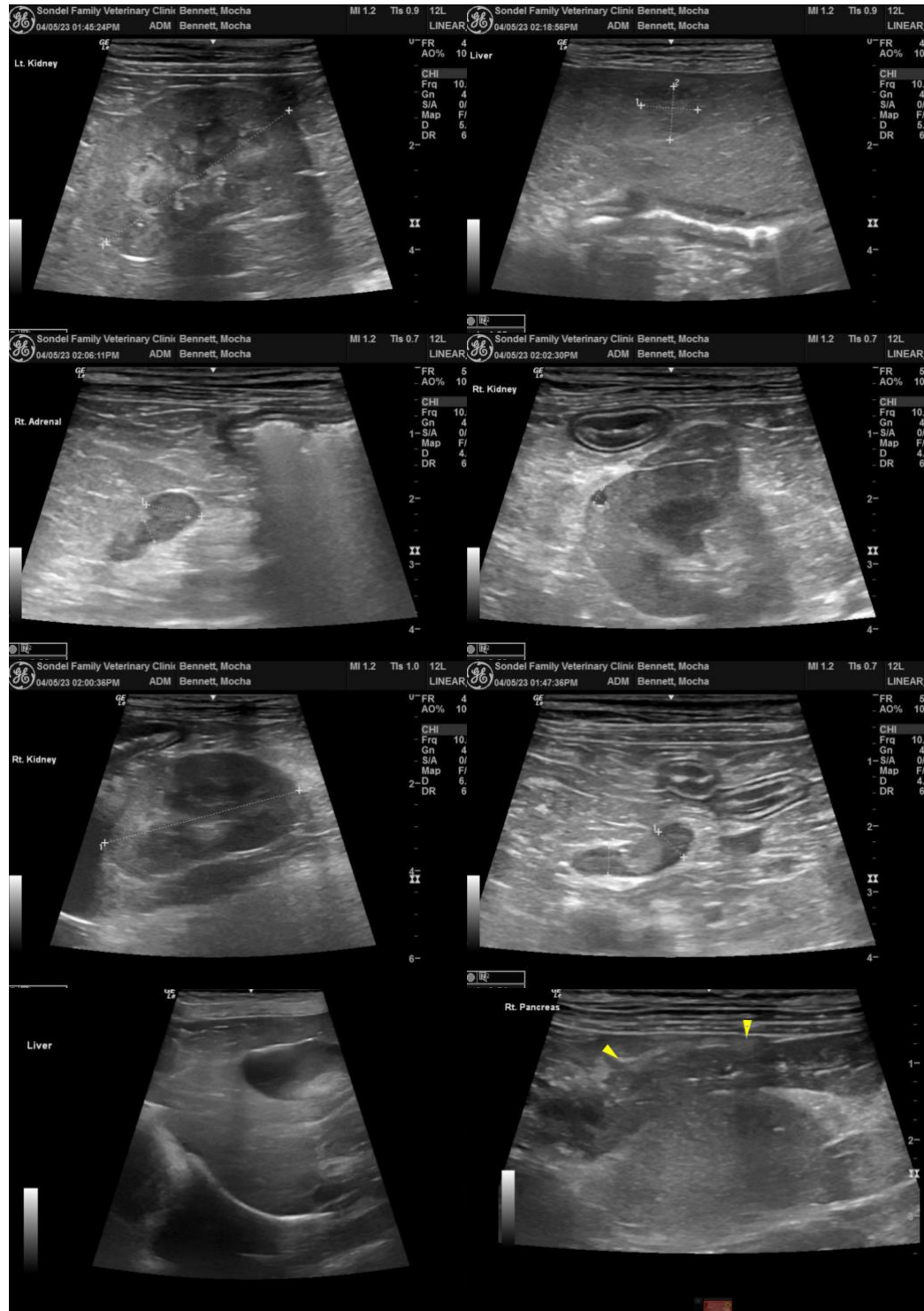
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



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can be of any further assistance please contact me.

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